Slide 1

COGNITIVE LINGUISTIC QUICK TEST

CLQT+

NANCY HELM-ESTABROOKS

Clinical Application of the Cognitive Linguistic Quick Test+ for SLPs

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Slide 2

Instructions for submitting forms for ASHA CEUs

Pearson will submit completed CE forms to ASHA if you

- Attend the entire 60 minutes of the live session (confirmed by our ReadyTalk verification report)

- Complete the
  - Attendance Sheet (only if more than one person is at your site)
  - ASHA Participant Form
  - Evaluation Form

- Please mail the forms postmarked no later than **August 8, 2017** to

  Darlene Davis, Pearson
  19500 Bulverde Road, Ste. 201
  San Antonio, TX , 78259

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- The mailed CE forms are postmarked after

  • **August 8, 2017**

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- CE forms are submitted for "partial credit" [not available]
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Questions about CEUs?
Contact Darlene Davis at darlene.k.davis@pearson.com

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Agenda

5 min: Introduction/Background of CLQT

15 min: Overview of the CLQT+

15 min: Overview of CLQT+ Interpretation

15 min: Clinical Use Cases of the CLQT+

10 min: Questions/Answers

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Learning Outcomes

Participants will learn to:

1. Identify data provided by the CLQT+
2. Use referral questions that may prompt CLQT+ administration
3. Discuss standard administration processes of the CLQT+

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Background: CLQT

The Cognitive Linguistic Quick Test—Plus (CLQT+) is a 2017 update of the original CLQT (2001).

The CLQT was designed to quickly assess strengths and weaknesses in five cognitive domains:

1. Attention
2. Memory
3. Executive Functions
4. Language, and
5. Visuospatial Skills

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Overview

- **Author:** Dr. Nancy Helm-Estabrooks
- **Age Range:** 18:0–89:11
- **Publication Date:** 2001 (CLQT); 2017 (CLQT+)
- **Qualification Level:** B
- **Completion Time:** 15–30 minutes
- **Administration:** Paper-and-pencil
- **Scores/Interpretation:** Criterion cut scores with descriptive severity ratings
- **Other Languages:** Spanish (CLQT only)

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Question 1

- What population would you most often assess with this test?
  1. TBI
  2. Dementia
  3. left hemisphere stroke
  4. right hemisphere stroke
  5. other

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What's new in the update?

Traditional Administration	Aphasia Administration
• Personal Facts	• Personal Facts
• Symbol Cancellation	• Symbol Cancellation*
• Confrontation Naming	• Confrontation Naming
• Clock Drawing	• Clock Drawing
• Story Retelling	• Story Retelling
• Symbol Trails	• Symbol Trails*
• Generative Naming	• Generative Naming
• Design Memory	• Design Memory
• Mazes	• Mazes*
• Design Generation	• Design Generation
	• **Semantic Comprehension**
	• *Additional points scored for following auditory directions within this task for the Aphasia Administration.

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Question 2

- Does this test provide you with the information you need for 3rd party payers?
  1. Yes
  2. No
  3. Comments:

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Question 4

- Does the test administration time fit within 3rd party dictated test-time parameters?
  1. Yes
  2. No

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Who uses the CLQT+?

- **Primarily non-school settings:**
  - Speech-language pathologists (SLPs)
  - Occupational therapists (OTs)
  - Psychologists/Neuropsychologists
  - Other qualified professionals interested in a quick measure of cognitive/linguistic status

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CLQT+ Benefits and Special Applications

- **Benefits:**
  - More flexibility in administration
  - Clearer interpretation for people with aphasia/language disorders
  - Quick, reliable cognitive assessment at table or bedside
  - Support for English- or Spanish-speaking adults with known or suspected neurological impairment as a result of stroke, traumatic brain injury, or dementia.

- **Special Applications:**
  - Progress monitoring (especially with Clock Drawing task)
  - Driving assessments
  - Competency assessments
  - Research

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Picking a tool to help answer… (referral questions)

1. "I need a screening tool for rehab in acute care prior to Psych evals." (SLP / OT / PT)
2. "I need a tool that helps detect early cognitive decline which may present as other conditions."
3. "I need a tool that I can use for progress monitoring."
4. "I need something that informs intervention planning."
5. "I need a tool to help supplement driving evaluations."

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Driving evaluations

Certified Driver Rehab Specialists and generalists, use CLQT:

1. As part of assessment process to indicate need for on-road assessment
2. Support dialogue around driving cessation decisions

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Question 3

• Do you use the results to make treatment decisions?
   1. Yes
   2. No
   3. Examples?

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Administration

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Diminished Language Capacity vs. Aphasia Administration

• When administering the CLQT+ to someone who has diminished language capability:
   • Administer the original ten tasks
      • Take note of any modifications indicated in the instruction banner at the beginning of each subtest on the Record Form.
   • Also…
      • Complete the examiner-rated items in the **Symbol Cancellation, Symbol Trails and Mazes subtests**
      • Administer the Semantic Comprehension task
      • Calculate the Auditory Comprehension score

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Personal Facts

1. This task helps lo assess memory and language abilities.
2. Examinees with aphasia may respond poorly to the items due to language problems.
   1. In such cases, the memory severity rating may not accurately recreate memory skills.
   2. Note whether examinees demonstrate better recall of lifelong facts (dote and place of birth) vs. newer facts [current age and address], a pattern seen especially in individuals with dementia and dosed head injury.
   3. Delayed and/or self corrected responses may indicate milder memory problems.

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Symbol Cancellation

1. Symbol Cancellation is a nonlinguistic task of visual attention and perception. It also offers information regarding the integrity of the upper and lower quadrants of left and right visual fields.
2. Observe examinees' scanning strategies.
   1. Are they searching laterally from left to right, down and up, or scanning unsystematically? Notice if examinees Failed to cancel symbols in one or more of the four quadrants.
3. Errors of omission (correct symbols not cancelled) and commission (incorrect symbols cancelled) may be secondary to: 1. generalized inattention, 2. visual discrimination problems, 3. partial or full hemianopsia, 4. visual neglect, or 5. inattention to one side or quadrant of space.
4. Observe whether there are similar visual field deficits on Clock Drawing, Symbol Trails, and Mazes tasks.

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Confrontation Naming

1. Deficits in confrontation naming are a key symptom of aphasia that can result from various forms of brain damage (e.g., stroke, head injury, dementia, tumors, infections).
2. Delayed responses suggest mild word-retrieval problems. Note immediate or delayed perseverations, repeated responses) of all or part of a previous word.
3. Although no points are deducted, an elaborated response may be symptomatic of verbosity or inability to limit information.
4. Ask the examinee to give a single word response. Use of seldom-used words may be a symptom of word-finding problems. Request a "common name." The types of errors examinees make can guide treatment of word-retrieval problems.

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Clock Drawing

1. Clock Drawing serves as a mini-screening tool for all cognitive domains.
2. This task can be re-administered to sample and monitor examinees' progress, deterioration, or stability across several cognitive domains.
3. Watch carefully as examinees draw the dock and note the strategies used.

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Story Retelling

1. Story Retelling helps lo assess auditory memory and comprehension, working memory, and language output skills.
2. Unrelated responses may indicate loss of topic or memory problems.
3. If partially correct information is provided, note whether recall is better for initial medial, or final parts of the story as indications of arousal, attention, and storage capacity.
4. Story Retelling is an easy way lo assess narrative skills.
5. Although no points are deducted for retelling the story out of sequence, you can analyze for recall of consecutive events building to the story conclusion by numbering each story element in the order reported.

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Symbol Trails (Trial 1)

1. Symbol Trails is a nonlinguistic task used to help assess planning, self-monitoring, working memory, and visual attention even in examinees with compromised language skills.
2. The two trial items introduce the concepts of graduating size and then alternating shapes. Examinees are required to manipulate both concepts in the Scored Item.
3. As you observe examinees perform the task, check to see whether there is inattention to one side or quadrant of space and/or impulsivity.
   1. Note whether examinees self-monitor and correct errors.

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Aphasia Administration of Symbol Trails Item: Alternating Sizes and Shapes

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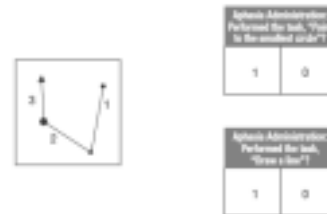
Generative Naming

1. In addition to quantifying word search and retrieval skills by one superordinate semantic category (Animals) and one phonetic category (m Words), the Generative Naming task enables you to qualitatively assess performance. Observe if examinees subcategorize animals (e.g., farm, zoo, pets) to aid word retrieval.
2. Perseveration Ratio: A ratio of 0.08 or greater indicates notable perseveration, which is indicative of brain damage. Example: 3 perseverations divided by: 13 total Animals responses = 0.23 (notable perseveration). Abnormal perseveration ratios may have diagnostic value for mild/borderline dementia.

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Design Memory

1. Design Memory is a nonlinguistic task that can provide information about visual discrimination and analysis, attention, and visual memory even in examinees with severe aphasia.
2. Examinees with brain damage confined to the left hemisphere may perform normally, whereas those with right-hemisphere damage may perform poorly.
3. This information can guide choice and use of treatment stimuli.
4. In analyzing errors, look for impulsive choices and/or perseverations (e.g., pointing to designs in the same position across trials).

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Mazes

1. Satisfactory performance on this task requires planning, mental flexibility, self-monitoring, and visual discrimination.
2. Poor planning and/or impulsivity will be reflected in lines going down incorrect paths and/or crossing walls.
3. Look for the ability to self-correct errors. Note neglect or inattention to one side of space. Compare performance on this task with that on the Symbol Trails task

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Design Generation

1. This is a nonlinguistic task of creativity and mental flexibility.
2. Look for perseverative responses, failure to maintain four straight lines connecting four dots, and/or neglect of stimuli on one side of space.

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General Administration Points: Semantic Comprehension

Aphasia Administrations Only!

1. Follow the instructions presented on the CLQT+ Record Form
2. Present the verbal description of each object and wait up to 10 seconds for the examinee to respond.
3. The examinee must indicate his or her choice by pointing to the stimulus.
4. If the examinee responds in any way other than pointing, a prompt should be given to the examinee to point to the correct stimulus.
5. You may repeat a question one time, as needed.

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Completing Scoring Worksheet: 1

1. Score Each Task & Domain/Index

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Completing Scoring Worksheet: 2 (Optional)

2. Compare Task Scores to Cut Scores (optional)
2a Record each task score   2b Find cut scores   2c Record which task scores are below the cut score

Task	2a Task Score	2b Ages 18-69	2b Ages 70-89	2c Below?
Personal Facts, p. 3		8	8	
Symbol Cancellation p. 3		11	10	
Confrontation Naming p. 4		10	10	
Clock Drawing p. 6		12	11	
Story Retelling p. 8		6	6	
Symbol trails p. 9		9	6	
Generative Naming p. 11		5	4	
Design Memory p. 12		5	4	
Mazes p. 13		7	4	
Design Generation p. 14		6	6	

* Cut scores are not calculated for Auditory Comprehension.

Completing Scoring Worksheet: 3

3. Determine Domain & Composite Severity Ratings

Front of Record Form

Development of new tasks

1. Picture stimuli for the Semantic Comprehension task were taken from the Confrontation Naming task
   - Verbal stimuli were developed to elicit nonverbal responses so that examinees can demonstrate their knowledge free from the requirements of expressive language.
2. CLQT users participated in a study to collect responses on the Semantic Comprehension task, as well as the other CLQT+ tasks.
   - Clinicians were asked to target people diagnosed with only a left hemisphere stroke and probable aphasia.
3. A split-half reliability estimate was calculated for the Auditory Comprehension task using the Spearman-Brown formula (r = .91).

Task Means and Standard Deviations of the CLQT Aphasia Sample and Nonclinical Research Sample (18-69)

Table 3.2 Task Means and Standard Deviations of the CLQT Aphasia Sample and Nonclinical Research Sample, by Age Category

Task Means and Standard Deviations of the CLQT Aphasia Sample and Nonclinical Research Sample (70-89)

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Clinical Sample of Individuals With Aphasia Compared to Matched Control

Table 5.4 Clinical Sample of Individuals With Aphasia Compared to Matched Control

CLQT Tasks	Clinical Mean	Clinical SD	Non-clinical Mean	Non-clinical SD	Difference	t value	p value	Standard difference	n
Personal Facts	4.6	3.1	8.0	8.1	3.46	9.06	<.05	1.37	79
Symbol Cancellation	9.1	4.4	11.2	2.4	2.19	3.90	<.05	0.62	75
Confrontation Naming	6.6	3.6	10.0	8.8	3.46	6.02	<.05	1.39	79
Clock Drawing	8.6	4.1	12.2	1.6	3.69	7.34	<.05	1.16	78
Story Retelling	3.1	3.1	7.8	1.6	4.66	14.90	<.05	2.48	60
Symbol Trails	6.7	3.6	8.9	2.1	2.24	4.73	<.05	0.79	75
Generative Naming	1.6	1.2	6.0	1.6	4.44	17.60	<.05	3.14	62
Design Memory	4.8	1.4	6.6	0.7	6.67	3.13	<.05	0.61	35
Mazes	6.8	3.6	7.3	1.6	1.33	4.30	<.05	0.66	35
Design Generation	4.8	3.6	7.6	2.2	2.76	6.33	<.05	1.18	62

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Question 5

- Do the test results point you to more comprehensive assessments? If so, give examples.
  1. Yes
  2. No
  3. Examples:

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Interpretation

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Interpreting CLQT+ Index Scores for Aphasia Administration

- Semantic Comprehension task & Auditory Comprehension
  1. Developed to enhance the assessment of individuals with diminished language capabilities/aphasia.
  2. No cut score (because the development of the task occurred after the initial release of the CLQT).
  3. However, expect results cut scores at or near perfect performance on the task (e.g., 8 out of 8 for Personal Facts, 10 out of 10 for Confrontation Naming).
  4. Auditory Comprehension task score much lower than 19
     - Individual likely experiencing difficulty understanding what they hear, and further evaluation might be warranted.

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Non-Linguistic Cognition Index (NLCI)

- Provides an estimate of cognitive functioning that is free of language demands when responding to task items.
- Intended to provide a more appropriate estimate of cognitive ability for those individuals with diminished language skills.
- The severity ratings (i.e., Within Normal Limits, Mild, Moderate, Severe) for this domain are based on the same representative population used to evaluate the other CLQT domain scores (i.e., Attention, Memory, Executive Functions, Language, Visuospatial Skills).
- The tasks included in the NLCI are the same as the Visuospatial Skills domain score (i.e., **Symbol Cancellation, Symbol Trails, Design Memory, Mazes, Design Generation**).
  - Contribution of each task score to the overall NLCI varies somewhat (compared to Visuospatial Skills), and are based on the author's clinical experience.

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Linguistic/Aphasia Index (L/AI)

- L/AI includes scores from Personal Facts, Confrontation Naming, Story Retelling, Generative Naming, and Semantic Comprehension.
- The Auditory Comprehension score plays a primary role in the L/AI score;
  - it contributes up to approximately one-third of the score's total raw score points (i.e., up to 19 of 56 total points).
- The L/AI includes expressive and receptive language components, both of which are important when working with individuals who have diminished language capacity.
- Severity Rating cut scores for this index score are based on a population of individuals with aphasia.
- Lower L/AI scores (i.e., more severe scores) indicate more significant problems with language comprehension and language expression.

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Question 6
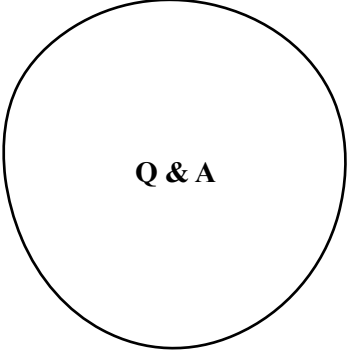
- Do you incorporate academic focused tests into your assessment process for older adults? If yes, which test do you use?
    1. Yes
    2. No
    3. Examples

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Q & A

Q & A

Q. Why are some items listed as "CLQT" and some as "CLQT+?"

A. Those items that are listed as "CLQT" are components that did not change between the original CLQT release and the release of the CLQT+.

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Q & A

Q. I already have the CLQT kit. What do I need to purchase to use the CLQT+?

A. You can purchase the following individual components:

- Record Forms (25)
- CLQT+ Response Booklets English/Spanish & English
- CLQT+ Stimulus Manual
- CLQT+ Manual Supplement

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Do you have any questions?

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